



THE UNITED STATES PATENT AND TRADEMARK OFFICE

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#100  
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Patent  
Docket No: 53091US009

In re Application of:

Ai-Ping Wei et al.

Serial No.: 09/448,633

Filed: November 24, 1999

For: FLUOROGENIC PROTEASE SUBSTRATES BASED ON DYE-DIMERIZATION

Group Art Unit: 1631

Examiner: M. Moran

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Signature: Melanie Gover

AMENDMENT UNDER 37 C.F.R. § 1.111

Commissioner for Patents  
Washington, DC 20231

Dear Sir:

In response to the Official Action dated June 14, 2001, please amend the application as follows:

In the Claims:

Please amend claims 1, 12, and 21 as follows:

- Sub b1 c1
1. (Once Amended) A method of biological assay comprising:
    - a) providing an enzyme substrate comprising two or more fluorescence dye groups bound to a flexible peptide comprising one or more enzymatically cleavable bonds, the dye groups being proximate such that free energy attractions draw the dye groups together so as to self-quench fluorescence of the dye groups, wherein self quenching of fluorescence of the dye groups is effected by dye stacking, and
    - b) contacting said substrate with a substance being assayed to determine the presence of an enzyme capable of cleaving an enzymatically cleavable bond wherein the enzymatic cleaving of said cleavable bonds of the peptide will release the fluorescent dye groups from dye stacking, thereby producing an increase in fluorescence intensity and indicating the presence of said enzyme.